

STAFIYCHUK, A. A.

Hay

Nutritive quality of rye hay in relation to the period of harvest. Korm. baza 3 No.6, 1952

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

STAFIICHUK, A. A.

Vetch

Feed value of beaded vetch. Korm. baza 3 no. 8, 1952

Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED.

1. STAFIYCHUK, A.A.
2. USSR (600)
4. Hay
7. Content and digestability of general and organic sulfur in hay depending upon harvesting time. Kokl.AK. sel'khoz 17 no 10 1952
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

1. STAFIICHUK, A.A.
2. USSR (600)
4. Cyanogen Compounds
7. Determining cyanogen compounds in plants, Sel. i sem. 20 no. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

STAFIYCHUK, A.A.

Quantity and digestibility of certain amino acids in hay from Sudan grass and Italian millet. Dop. AN URSR no. 4:271-274 '54.  
(MIRA 8:4)

1. Ukrains'kiy n.-d. institut zernovogo gospodarstva im. Kuybysheva.  
Predstavлено деяствител'ным членом Академии наук USSR A.I.Dushechkinym.  
(Amino acids) (Hay)

USSR/Cultivated Plants - Fodder .

M.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15710

Author : A.A. Stafylychuk

Inst : The All-Union Scientific Research Institute for Corn .

Title : The Food Value of Ensiled Corn in Relation to the Harvesting Times.  
(Pitatel'nost' kukuruznogo silosa v zavisimosti ot srokov uborki).

Orig Pub : Byul. Vses. n.-i. in-ta kukuruzy, 1956, No 2, 14-18.

Abstract : At the Erastovskiy Experimental Field in 1955 corn standing at a plant density of 30 thousand plants per 1 hectare were harvested in three periods: at the beginning, in the middle and at the end of the milky stage of cob ripeness. Tests of the digestibility of all the ensilage was made on wethers, and the ensiled cobs on

Card 1/2

121

STAFIYCHUK, A.O., kand. sel'skokhozyaystvennukh nauk

Utilization of corn. Nauka i zhyttia 9 no.3:34-35 Mr '59.  
(MIRA 12:4)  
(Corn (Maize))

STAFIYCHUK, R.A., kand.sel'skokhoz.nauk

Determining the quality of protein in corn. Dokl.Akad.sel'khoz.  
no.6:7-9 '59. (MIR 12:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kukuruzy.  
Predstavlena akademikom B.P.Sokolovym.  
(Corn(Maize)) (Proteins)

STAFIYCHUK, Andrey Afanas'yevich[Stafliichuk, A.O.], kand. sel'-khoz.nauk; ZADONTSEV, A.I., zasl. deyatel' nauki USSR, akademik, red.; LIVENSKAYA, O.I.[Livens'ka, O.I.], red.; GLUSHKO, G.I.[Hlushko, H.I.], tekhn. red.

[Using corn as silage] Vykorystannia kukurudzy na sylos.  
Dnipropetrovs'k, Dnipropetrovs'ke knyzhkove vyd-vo, 1961. 14 p.  
(MIRA 15:7)

1. **Direktor** Vsesoyuznogo nauchno-issledovatel'skogo instituta kukuruzy i Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Zadontsev).  
(Ukraine—Corn (Maize)) (Ensilage)

(A)

**Dynamics of the polarization of barium titanate.** B. V. Sinyakov, R. A. Stafchuk, and B. K. Chernyl (Dnepropetrovsk State Univ.), *Zhur. Eksppl. Teoret. Fiz.* 21, 610-17 (1951).—The dielec. const.  $\epsilon$  of  $\text{BaTiO}_3$  was measured in rectangular d.c. impulses produced by impacts of steel balls against a steel plate; variation of the size of the steel balls permitted variation of the duration of the impulse from  $8 \times 10^{-6}$  to  $9 \times 10^{-5}$  sec. (1) Within those limits, the variation of  $\epsilon$  as a function of the temp. is unaffected by the length of the impulse;  $\epsilon$  at the Curie point is slightly greater than in high-frequency ( $10^6$  hertz) a.c. The error inherent in ballistic measurements in d.c., and due to the cond., is eliminated in the short rectangular impulse method. (2) Curves of  $\epsilon$  as a function of the elec. field strength  $E$  ( $1-20$  kv/cm $^2$ ), below the Curie point, have a max.; that this is

not due to foregoing polarization at the lower  $E$  is demonstrated by the persistence of the shape of the curve and the max., in expt., in which previous polarization was authentically wiped out by heating to  $300^\circ$  between consecutive measurements. In cyclic variation of  $E$ , below the Curie point, the polarization  $Q$  forms a hysteresis loop even though satn. is not reached; the 1st loop is distinctly asym. with respect to the axis of  $E$ , but this asymmetry diminishes in repeated cycles. The spontaneous polarization is of the order of  $4-6.6 \times 10^{-8}$  coulombs/sq. cm. (3) In contrast to Rochelle salt, the polarization  $Q$  in  $\text{BaTiO}_3$  is not additive, in the sense that at const.  $E$  and temp., the increments of  $Q$  in consecutive equal intervals of time are not equal. In expt., with impulses of different lengths,  $\delta \times 10^{-6}$ ,  $\delta \times 10^{-5}$ , or  $9 \times 10^{-5}$  sec. each, with each following curve taken down after prolonged heating of the specimen, plots of  $Q$  against the time  $t$ , for the 3 impulse lengths  $\tau$ , show  $Q$  at the same total  $t$  to be much greater with the shorter  $\tau$ . Owing to this absence of additivity in  $\text{BaTiO}_3$ , the rate of polarization  $i$ , detd. by the slope of the curve ( $Q(t)$ ) at  $t = 0$ , is not a true rate even though it does give some insight into the dynamics of the process. As illustrated by a curve at  $E = 3.73$  v./cm.,  $\tau = 5.27 \times 10^{-5}$  sec.,  $i$  as a function of the temp. behaves as the dielec. const. of  $\text{BaTiO}_3$ , with a peak at about  $105^\circ$ . As a function of  $E$ , below the Curie point,  $i$  increases non-linearly with  $E$ , approx. following  $i = A e^{aE}$ , where  $A$  and  $a$  are temp.-dependent. Above the Curie point,  $i$  is a linear function of  $E$ . Intentional preliminary polarization of a sample previously depolarized by heating results in a diminished  $i$  in a subsequent expt.; that effect increases with in-

over

creasing closeness to the Curie point and decreases rapidly above it. (4) The fact that BaTiO<sub>3</sub> is a semiconducting substance only in the presence of impurities giving rise to free Ba<sup>++</sup> ions indicates that its polarization is due to deformation of lattice cells by excess Ba<sup>++</sup> ions; this effect produces regions of spontaneous polarization through the action of the dipole moment of the deformed cell. The added polarization that arises on application of an external field is the result of the displacement of free Ba<sup>++</sup> ions. With increasing *E*, the size of the spontaneous-polarization domains increases until they come into contact with one another, at which point *Q* reaches satn.; the value of *E* at which the satn. is reached should decrease with increasing impurity content, and the Curie point should shift to lower temps. The 1st impulse sets the polarization through growth of the regions of spontaneous polarization and rotation of their elec. dipole moment; the increase of *Q* in further impulses is attributed to accumulation of weakly bound electrons around the polarized regions, i.e. to increasing space charge. This point of view is corroborated by preliminary expts. on the distribution of the potential in BaTiO<sub>3</sub>, which below the Curie point remains uniform while the current decreases with time, whereas 30-40° above the Curie point there is no decrease of the current, i.e. no space charge. N. Thon

STAFAYCHUK, YE. A.

USSR/Electricity - Dielectrics

Dec 51

"Effect of Displacing Field on Magnitude of Dielectric Permeability and Dielectric Losses in BaTiO<sub>3</sub>" Ye. V. Sinyakov, Ye. A. Stafaychuk, I. S. Sinegubova, Dnepropetrovsk State U

"Zhur Eksper i Teoret Fiz" Vol. XXI, No. 12, pp 1396-1402

Study of thermal behavior of dielectric permeability and losses of BaTiO<sub>3</sub> under effect of displacing elec field showed shift of Curie point toward higher temp. Found sharp drop of tangent of angle of dielec losses and smoothing of its characteristic max under superposition of

198013

USSR/Electricity - Dielectrics  
(Contd) Dec 51

strong displacing field. Observed distortion of hysteresis loop under displacing field effect.

Submitted 27 Jan 51

198013

SENIAKOV, Ye. V.; STAFYCHUK, YE. A.; CHERNY, B. K.

Barium Titanate.

Authors' reply to remarks of M. S. Kosman on their article "Dynamics of polarization process of barium titanate." Zhur. eksp. i teor. fiz., 23, No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

S/181/60/002/01/18/035  
B008/B014

247800

AUTHORS: Sinyakov, Ye. V., Stafiychuk, Ye. A.

TITLE: Solid Solutions of Niobates and Tantalates of Transition Elements Formed on the Basis of BaTiO<sub>3</sub>

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 1, pp. 73-79

TEXT: The authors examined niobates and tantalates of Mn, Co, and Ni as well as their solid solutions on the basis of BaTiO<sub>3</sub>. The samples were prepared by the usual ceramic procedure. The authors prepared compounds corresponding to the formulas AB<sub>2</sub>O<sub>6</sub> and A<sub>2</sub>B<sub>2</sub>O<sub>7</sub> (A = Mn, Co, Ni; B = Nb, Ta) and their solid solutions ranging from 0.5 to 7 mole% in BaTiO<sub>3</sub>. The dielectric constant of compounds of the types AB<sub>2</sub>O<sub>6</sub> and A<sub>2</sub>B<sub>2</sub>O<sub>7</sub> within the range of -195 to +195°C was found to be independent of temperature. The quantities  $\epsilon$  and tan  $\delta$  are indicated in Table 1. The compounds mentioned are not piezoelectric. Figs. 1-2 illustrate temperature dependences of  $\epsilon$  for systems of the type BaTiO<sub>3</sub>-AB<sub>2</sub>O<sub>6</sub>. Addition of more

Card 1/3

✓

Solid Solutions of Niobates and Tantalates of Transition Elements Formed on the Basis of  $\text{BaTiO}_3$  S/181/60/002/01/18/035 B008/B014

than 1 mole% of  $\text{AB}_2\text{O}_6$  to  $\text{BaTiO}_3$  causes the piezoelectric properties of barium titanate to vanish. Solid solutions of  $\text{BaTiO}_3$  with pyroniobates and tantalates of Mn, Co, and Ni (Figs. 3-7) differ greatly in their properties. A strong shift of the Curie point toward lower temperatures may be observed in all compounds of  $\text{BaTiO}_3\text{-A}_2\text{B}_2\text{O}_7$  under consideration (Fig. 8, Table 2). All solid solutions of the systems  $\text{BaTiO}_3\text{-A}_2\text{B}_2\text{O}_7$  are piezoelectrics. Some of them have hysteresis loops of a marked rectangular shape and a non-linearity exceeding largely that of  $\text{BaTiO}_3$ .

A comparison of the electric properties of the systems under review reveals that  $\text{AB}_2\text{O}_6\text{-BaTiO}_3$  and  $\text{A}_2\text{B}_2\text{O}_7\text{-BaTiO}_3$  differ very much in their composition. It may be assumed that the addition of  $\text{AB}_2\text{O}_6$  to barium titanate leads to structural deformations. This was established on the basis of strongly blurred lines on X-ray pictures of the samples and on the basis of a strong deformation of the samples after sintering (Fig. 9). Presumably, this deformation may be considered to be the reason for the ✓

Card 2/3

85884

9,2180 (3203,1162)  
24,7700 (1043,1143)S/048/60/024/011/020/036  
B006/B056AUTHORS: Stafiychuk, Ye. A. and Sinyakov, Ye. V.TITLE: The Electrical Conductivity of Solid Solutions of Niobates  
and Tantalates of Mn, Co, and Ni on a BaTiO<sub>3</sub> BasisPERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,  
Vol. 24, No. 11, pp. 1380 - 1383

TEXT: The present paper is a reproduction of a lecture delivered on the 3rd Conference on Ferroelectricity, which took place in Moscow from January 25 to 30, 1960. The authors investigated the dielectric properties of polycrystalline samples of solid solutions of Mn-, Co-, and Ni-niobates and -tantalates on a BaTiO<sub>3</sub> basis in variable electric fields, and give a report on the results obtained with respect to the temperature- and concentration dependence of the electrical conductivity, the thermo-emf, as well as of the influence exerted by Mn<sup>2+</sup>-, Co<sup>2+</sup>-, and Ni<sup>2+</sup>-ions upon the electrical conductivity of BaTiO<sub>3</sub>. The production of

Card 1/6

85884

The Electrical Conductivity of Solid Solutions  
of Niobates and Tantalates of Mn, Co, and Ni      S/048/60/024/011/020/036  
on a BaTiO<sub>3</sub> Basis      B006/B056

the samples had been described in Ref.1. On the disk-shaped samples, platinum electrodes were fixed by means of cathode sputtering. The investigations were made within the temperature range of 50-200°C and with fields of the order of 20 v/mm. The most important results of the measurements are given in Tables 1 and 2. The "compounds" given in the form "A<sub>2</sub>B<sub>2</sub>O<sub>7</sub>" showed a break in the curve  $\log \sigma = f(1/T)$ . The temperature at the break, the activation energy (calculated according to the formula  $\sigma = \sigma_0 \exp(-u/2kT)$ ), and the resistivity increase during the transition from Mn  $\rightarrow$  Ni. The results obtained by investigating the influence exerted by the various ions upon the ferroelectric properties of BaTiO<sub>3</sub> are given in Table 2. The temperature dependence of the thermo-emf  $\alpha$  is shown in the three diagrams of Fig.2 for the solid solutions of the kind BaTiO<sub>3</sub> - "A<sub>2</sub>B<sub>2</sub>O<sub>7</sub>" for various concentrations of the additions. The  $\alpha(t)$ -curves take a considerably different course and partly also differ considerably only in the case of different additional concentrations. Thus, e.g., BaTiO<sub>3</sub> with 1 mole% "Mn<sub>2</sub>Ta<sub>2</sub>O<sub>7</sub>" shows a  $\alpha$  decreasing

Card 2/6

85884

The Electrical Conductivity of Solid Solutions  
of Niobates and Tantalates of Mn, Co, and Ni  
on a  $\text{BaTiO}_3$  Basis

S/048/60/024/011/020/036  
B006/B056

exponentially with temperature, and with 0.5 mole%,  $\alpha$  increases exponentially with temperature (between 70 and 150°C). There are 2 figures, 2 tables, and 4 references: 2 Soviet and 2 Japanese.

Таблица 1

Table 1

Соединение 1	U, eV. 2	$\rho_{уд}$ при 149° Ω см 3	Соединение 4	U <sub>1</sub> , eV 5	U <sub>2</sub> , eV 6	Темпера- тура изло- жения, °C 7	$\rho_{уд}$ при 149° Ω см 8
							7
$\text{MnTa}_2\text{O}_6$	1,84	$1,03 \cdot 10^{11}$	$\text{Mn}_2\text{Ta}_2\text{O}_7$	0,54	1,02	115	$6 \cdot 10^8$
$\text{CoTa}_2\text{O}_6$	1,7	$3,57 \cdot 10^{11}$	$\text{Co}_2\text{Ta}_2\text{O}_7$	0,62	1,16	127	$2 \cdot 10^7$
$\text{NiTa}_2\text{O}_6$	1,68	$3 \cdot 10^{10}$	$\text{Ni}_2\text{Ta}_2\text{O}_7$	1,92	1,56	153	$4 \cdot 10^{10}$
$\text{MnNb}_3\text{O}_6$	1,08	$2,49 \cdot 10^9$	$\text{Mn}_2\text{Nb}_3\text{O}_7$	1,38	—	—	$1,6 \cdot 10^7$
$\text{CoNb}_3\text{O}_6$	1,56	$2,99 \cdot 10^{10}$	$\text{Co}_2\text{Nb}_3\text{O}_7$	1,46	1,76	113	$5,2 \cdot 10^7$
$\text{NiNb}_3\text{O}_6$	1,74	$7,7 \cdot 10^{11}$	$\text{Ni}_2\text{Nb}_3\text{O}_7$	1,62	1,19	150	$6,2 \cdot 10^{11}$

Legend to Table 1: 1) Compound; 2) U, 3) resistivity at 149°C, 4) compound, 5)  $U_1$ , 6)  $U_2$ , 7) temperature of the breaking point, 8) resistivity at 149°C.

Table 1

Card 3/6

85864  
 S/048/60/024/011/020/036  
 B006/B056

Добавка	Мол. %	U <sub>1</sub> , eV	U <sub>2</sub> , eV	ρ <sub>ЭД</sub> при 161°	
				4	1°
NiNb <sub>2</sub> O <sub>6</sub>	1	2,6	1,2	8·10 <sup>11</sup>	
	2	1,74	0,74	4·10 <sup>11</sup>	
	3	1,44	0,14	1,5·10 <sup>12</sup>	
CoNb <sub>2</sub> O <sub>6</sub>	1,5	1,6	0,8	3·10 <sup>12</sup>	
	2	1,16	0,42	1,6·10 <sup>11</sup>	
	3	0,78	—	2·9·10 <sup>10</sup>	
MnNb <sub>2</sub> O <sub>6</sub>	0,5	2,0	0,4	7·5·10 <sup>11</sup>	
	1	1,68	1,2	2·1·10 <sup>11</sup>	
	2	1,02	—	3·7·10 <sup>10</sup>	
Mn <sub>2</sub> Nb <sub>2</sub> O <sub>7</sub>	3	1,04	—	2·9·10 <sup>10</sup>	
	3,5	1,04	0,96	2·3·10 <sup>10</sup>	
	7	1,12	1,04	5·4·10 <sup>9</sup>	
«Ni <sub>2</sub> Nb <sub>2</sub> O <sub>7</sub> »	1	1,82	0,8	3·1·10 <sup>11</sup>	
	2	1,9	0,7	3·10 <sup>11</sup>	
	3	1,52	1,02	3·28·10 <sup>11</sup>	
«Co <sub>2</sub> Nb <sub>2</sub> O <sub>7</sub> »	1	1,2	0,86	8·2·10 <sup>10</sup>	
	2	0,78	—	1·9·10 <sup>9</sup>	
	3	0,92	1,28	2·3·10 <sup>9</sup>	
«Mn <sub>2</sub> Nb <sub>2</sub> O <sub>7</sub> »	0,5	1,3	1,2	3·8·10 <sup>10</sup>	
	1	0,98	0,98	1·10 <sup>10</sup>	
	2	1,12	—	9·8·10 <sup>9</sup>	
«Mn <sub>2</sub> Nb <sub>2</sub> O <sub>7</sub> »	3	1,04	0,88	3·8·10 <sup>9</sup>	
	5	0,98	—	1·3·10 <sup>9</sup>	
	7	1,0	—	6·10 <sup>8</sup>	

Table 2

Card 4/6

Руд при 60° Ω см	Темпера- тура из- лома	Добавка	U, eV		
			1	2	3
6	7				
4,3·10 <sup>11</sup>	138,78	NiTa <sub>2</sub> O <sub>6</sub>	1	1,78	
1,2·10 <sup>13</sup>	127		2	1,78	
5,6·10 <sup>13</sup>	127		—	—	
1,1·10 <sup>14</sup>	138				
8,9·10 <sup>11</sup>	181	CoTa <sub>2</sub> O <sub>6</sub>	1	0,7	
5,1·10 <sup>11</sup>	147		2	0,8	
3,3·10 <sup>11</sup>	—		3	0,88	
8,5·10 <sup>10</sup>	144		5	1,0	
2·10 <sup>3</sup>	Cr. 109	MnTa <sub>2</sub> O <sub>6</sub>	1	1,12	
1,6·10 <sup>3</sup>	Cr. 97		2	1,05	
8·4·10 <sup>3</sup>	—		3	1,0	
5·6·10 <sup>11</sup>	145		—		
6·1·10 <sup>11</sup>	140		7	1,04	
1,3·10 <sup>11</sup>	—				
1·1·10 <sup>13</sup>	124	«Ni <sub>3</sub> Ta <sub>2</sub> O <sub>7</sub> »	1	2,18	
5·2·10 <sup>12</sup>	147		2	1,84	
3·9·10 <sup>13</sup>	91		3	1,5	
1,15·10 <sup>13</sup>	80		5	1,2	
9·4·10 <sup>10</sup>	185	«Co <sub>2</sub> Ta <sub>2</sub> O <sub>6</sub> »	1	0,78	
1·1·10 <sup>10</sup>	—		2	0,82	
3·6·10 <sup>9</sup>	—		3	0,96	
1·6·10 <sup>8</sup>	—		5	1,2	
4·1·10 <sup>13</sup>	Cr. 109	«Mn <sub>3</sub> Ta <sub>2</sub> O <sub>6</sub> »	0,5	1,5	
1·2·10 <sup>11</sup>	119		1	1,04	
1·6·10 <sup>10</sup>	—		2	0,96	
6·4·10 <sup>9</sup>	130		3	0,96	
2·6·10 <sup>8</sup>	—		5	0,92	
1·2·10 <sup>8</sup>	—		—		

85884  
S/048/60/024/011/020/036  
B006/B056

Table 2

Card 5/6

85884

S/048/60/024/011/020/036  
B006/B056

$U_1$ , eV	$U_2$ , eV	$\rho_{12}$ при 150°, $\Omega \text{ см}$	$\rho_{12}$ при 70°, $\Omega \text{ см}$	Температура плавления
$q$	$q$	$6$	$6$	$7$
0,7	0,94	$1,96 \cdot 10^11$	$2,8 \cdot 10^13$	145; 98
0,94	—	$2,6 \cdot 10^11$	—	145
—	—	—	—	—
0,54	0,64	$5,4 \cdot 10^10$	$2,5 \cdot 10^11$	132
0,54	0,64	$1,2 \cdot 10^11$	$8,9 \cdot 10^11$	150
0,54	0,64	$1,4 \cdot 10^10$	$1,7 \cdot 10^11$	90
0,5	0,8	$5,2 \cdot 10^10$	$7,3 \cdot 10^11$	123
—	—	—	—	—
—	—	$4,3 \cdot 10^11$	$6 \cdot 10^11$	Cr. 95
0,84	0,84	$9,5 \cdot 10^8$	$1,9 \cdot 10^11$	113
—	—	$6,6 \cdot 10^8$	$1,7 \cdot 10^11$	—
—	—	—	—	—
—	—	$9,7 \cdot 10^8$	$2,5 \cdot 10^10$	—
0,88	0,88	$3,5 \cdot 10^10$	$2,7 \cdot 10^11$	147
1,0	1,0	$1,2 \cdot 10^10$	$5,2 \cdot 10^11$	134
1,2	1,2	$3,6 \cdot 10^10$	$1,2 \cdot 10^11$	130
—	—	$2,5 \cdot 10^10$	$1,5 \cdot 10^11$	—
—	—	—	—	—
—	—	$2 \cdot 10^10$	$2 \cdot 10^11$	—
—	—	$2,2 \cdot 10^8$	$2,8 \cdot 10^8$	—
—	—	$2,2 \cdot 10^8$	$3,7 \cdot 10^8$	—
—	—	$1,1 \cdot 10^8$	$4,3 \cdot 10^8$	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
0,82	0,82	$1 \cdot 10^11$	$6 \cdot 10^11$	Cr. 104
—	—	$2,9 \cdot 10^11$	$6 \cdot 10^10$	132
—	—	$2,6 \cdot 10^8$	$5,8 \cdot 10^8$	—
—	—	$6,2 \cdot 10^8$	$1,2 \cdot 10^9$	—
—	—	$1,5 \cdot 10^8$	$2,6 \cdot 10^8$	—
—	—	—	—	—

Table 2

Legend to Table 2: 1) addition, 2) concentration in mole%, 3)  $U_1$ , 4)  $U_2$ , 5) resistivity at 161°C, 6) resistivity at 80°C, 7) temperature of the break.

Card 6/6

85885

S/048/60/024/011/021/036  
B006/B060

24,7300(1043,1145,1160)

AUTHORS: Sinyakov, Ye. V. and Stafiychuk, Ye. A.TITLE: Properties of Some Solid Solutions of the Type  
BaTiO<sub>3</sub> - "A<sub>2</sub>B<sub>2</sub>O<sub>7</sub>" in Strong Electric FieldsPERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,  
Vol. 24, No. 11, pp. 1384-1386

TEXT: This is the reproduction of a lecture delivered at the Third Conference on Ferroelectricity which took place in Moscow from January 25 to 30, 1960. The authors examined specimens of compositions A<sub>0</sub> - B<sub>2</sub>O<sub>5</sub>, 2A<sub>0</sub> - B<sub>2</sub>O<sub>5</sub>, where A: <sup>1</sup>Mn, <sup>1</sup>Co, <sup>1</sup>Ni and B: <sup>1</sup>Nb or <sup>1</sup>Ta, as well as their solid solutions on BaTiO<sub>3</sub> basis. The compositions 2A<sub>0</sub> - B<sub>2</sub>O<sub>5</sub> proved to be a mixture of meta-compounds with oxides of bivalent metals and are called "pyrocompounds". The nonlinear properties of the specimens were measured at 50 cps with an instrument described in Ref. 6 at temperatures which were about equally distant from the Curie point. The measurement results are graphically shown in Figs. 1,2 and numerically compiled in a Table.

✓

Card 1/3

85885

Properties of Some Solid Solutions of the  
Type  $\text{BaTiO}_3$  - " $\text{A}_2\text{B}_2\text{O}_7$ " in Strong Electric FieldsS/048/60/024/011/021/036  
B006/B060

Position and height of the peaks of the  $\epsilon(E)$  curves are greatly dependent on the addition;  $\text{BaTiO}_3$  - " $\text{Ni}_2\text{Ta}_2\text{O}_7$ " has, e.g., for 0 and 1 mole% addition about the same  $\epsilon(E)$  curves, while at 2 mole% the maximum lies at smaller  $E$  and is considerably higher, and at 3 mole% the  $\epsilon(E)$  curve is considerably lower, the maximum being small and appearing only at large  $E$  values. Fig. 2 shows the effect of additions upon height and position of the maxima of the  $\epsilon(E)$  curves. Investigation results are in good agreement with X-ray and high-frequency experiments. It was found that the introduction of bivalent cations of transition metals causes the tetragonality of unit cells to drop considerably and that the Curie point is markedly shifted toward low temperatures. The greatest nonlinearity is found in such compounds as exhibit the least tetragonalities, i.e., those with  $\text{Ni}^{2+}$  ions. Although the ionic radii of  $\text{Mn}^{2+}$ ,  $\text{Co}^{2+}$ , and  $\text{Ni}^{2+}$  are not differing appreciably, they still have quite different effects upon the properties of solid solutions on  $\text{BaTiO}_3$  basis, which fact is explained by the different filling of the 3d subshells of these ions. There are 2 figures, 1 table, and 7 references: 5 Soviet, 1 British, and 1 US.

X

Card 2/3

85885

Properties of Some Solid Solutions of the  
Type  $\text{BaTiO}_3\text{-A}_2\text{B}_2\text{O}_7$  in Strong Electric FieldsS/048/60/024/011/021/036  
B006/B060

1 Добавка	1 мол. %				2 мол. %				3 мол. %				
	$\theta, ^\circ\text{C}$	$E_m, \text{kV cm}^{-1}$	$\epsilon_m$	$c/a$	$\theta, ^\circ\text{C}$	$E_m, \text{kV cm}^{-1}$	$\epsilon_m$	$\theta, ^\circ\text{C}$	$E_m, \text{kV cm}^{-1}$	$\epsilon_m$	$\theta, ^\circ\text{C}$	$E_m, \text{kV cm}^{-1}$	$\epsilon_m$
« $\text{Mn}_2\text{Nb}_2\text{O}_7$ »	90	7	10800	1,007 <sub>s</sub>	35	3,3	16000	-25	12	5100			
« $\text{Co}_2\text{Nb}_2\text{O}_7$ »	82	5	12000	1,005 <sub>s</sub>	22	2,2	20800	-70	8,6	7340			
« $\text{Ni}_2\text{Nb}_2\text{O}_7$ »	73	4,3	9750	1,003 <sub>s</sub>	1	1,09	32400	-95	6,88	5500			
« $\text{Mn}_2\text{Ta}_2\text{O}_7$ »	82	7,6	8100	1,006 <sub>s</sub>	44	2,98	11000	8	—	—			
« $\text{Co}_2\text{Ta}_2\text{O}_7$ »	85	6,18	12800	1,004 <sub>s</sub>	7	1,95	16400	-76	9,23	5200			
« $\text{Ni}_2\text{Ta}_2\text{O}_7$ »	66	3,2	14900	1,004 <sub>s</sub>	-7	1,45	28000	-108	4,14	8040			

Legend to the Table: Nonlinear properties of the solutions of the  
 $\text{BaTiO}_3\text{-AOAB}_2\text{O}_6$  type. 1) Addition. The subscript  $m$  denotes the value at  
 the  $\epsilon(E)$  curve maximum.

Card 3/3

15-2650

28142  
S/185/61/006/002/018/020  
D210/D304

AUTHOR: Stafiychuk, Ye.A.

TITLE: The problem of the influence of NiO and MnO on dielectric properties of  $\text{BaTiO}_3$

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 2, 1961,  
277 - 279

TEXT:  $\text{BaTiO}_3$  was prepared synthetically with additions of MnO between 0, 1 and 7 mol %. The results of measurements are shown. The system  $\text{BaTiO}_3$  - NiO was studied by Ye.V. Sinyakov, F.F. Kodzhespirov, B.K. Chornyy (Ref. 2: Nauchn. zap. Dnepropetrovskogo gos. un-ta, vol. LXV, 36, 1956). It is said that it is possible that MnO in the case of  $n > 1$  mol % leads to the partial formation of the hexagonal modification of  $\text{BaTiO}_3$  but on the X-ray photogramm of the specimen with 7 mol % MnO no additional lines were found. It is necessary to know which of the cations in the structure of

Card 1/3

28442  
S/185/61/006/002/018/020  
D210/D304

The problem of the influence . . .

X

$\text{BaTiO}_3$  is replaced by the cation of the admixture. The radii of the bivalent cations  $\text{Mn}^{++}$  and  $\text{Ni}^{++}$  are much smaller than the radius of the  $\text{Ba}^{++}$  cation, but much larger than that of the Ti ion. The assumption that Mn and Ni enter  $\text{BaTiO}_3$  in trivalent state and replace the ion  $\text{Ti}^{++++}$  is to be rejected due to the boiling temperature of the specimens ( $1360^\circ$ ). Besides, it was proved by Hurd, Simpson, and Tredgold that these ions enter  $\text{BaTiO}_3$  in bivalent state. The author believes that the cations  $\text{Mn}^{++}$ ,  $\text{Co}^{++}$ ,  $\text{Ni}^{++}$  occupy the positions of Ba ions in  $\text{BaTiO}_3$ , and that this view is confirmed by comparison of the displacements of Curie temperatures for 1 mol %  $\text{NiO}$  ( $\Delta\theta = 22^\circ\text{C}$ ) and  $\text{MnO}$  ( $\Delta\theta = 14^\circ\text{C}$ ). The comparison is not correct if one assumes that in case of 1 mol %  $\text{MnO}$  the admixture is not entirely included into the solid solution, but from the consideration of the curves  $\theta = f(n\%)$  where  $n \leq 1 \%$ , one concludes that at equal concentrations of  $\text{MnO}$  and  $\text{NiO}$  the Curie temperature is lower in the case of  $\text{NiO}$ . It is known that if  $\text{Ti}^{++++}$  in  $\text{BaTiO}_3$  is replaced by an ion of larger radius, the Curie tem-

Card 2/3

The problem of the influence ...

26442  
S/185/61/006/002/018/020  
D210/D304

perature decreases, and the larger the radius of the replacing ion the larger  $\theta$  must be. If  $Mn^{++}$  and  $Ni^{++}$  replaced  $Ti^{++++}$ ,  $\Delta\theta$  for the system  $BaTiO_3 - MnO$  would be larger for the system  $BaTiO_3 - NiO$  (since  $r_{Ni^{++}} < r_{Mn^{++}}$ ) which contradicts the experimental data. Substitution of  $Ba^{++}$  by an ion of smaller radius also leads to lowering the Curie point. In the present case ( $r_{Ni^{++}} < r_{Mn^{++}}$ ) the decrease is larger in the system containing  $NiO$ . There are 1 figure, and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: Sakudo Tunetaro, J. Phys. Soc. Japan, 12, 1050, 1957; I.D. Hurd, A.W. Simpson, R.H. Tredgold, Proc. Phys. Soc. 73, pt. 3, 448, 1959; H.W. Gandy, Phys. Rev. 113, s. II, 795, 1959.

ASSOCIATION: Dnipropetrovs'kyy derzhavnyy universytet (State University, Dnepropetrovsk)

SUBMITTED: September 9, 1960

Card 3/3

5.4800

37937  
S/181/62/004/005/028/055  
B106/B112AUTHOR: Stafiychuk, Ye. A.TITLE: Reversible characteristics of some solid solutions of the type  $\text{BaTiO}_3 - \text{A}_2\text{B}_2\text{O}_7$  :::

PERIODICAL: Fizika tverdogo tela, v. 4, no. 5, 1962, 1270 - 1273

TEXT: The reversible characteristics of ceramic  $\text{BaTiO}_3$  specimens with additions of the type  $\text{A}_2\text{B}_2\text{C}_7$  were measured and calculated in order to explain the changes in these characteristics with decreasing Curie point. The displacement of the Curie point in a constant field can be expressed by

$\Delta T_c = \frac{1}{A'} \left( -\frac{2C}{B} \right)^{1/2} E$ . The dependence of these constants  $A'$ ,  $B$ , and  $C$  on the concentration of the added amount when a phase transition of the first kind occurs was also established. The absolute values of the constants  $B$  and  $C$  increase with the concentration but  $A'$  remains nearly constant. The phase transition point is displaced to higher temperatures and the dependence  $\Delta T_c = f(E)$  is linear in  $\text{BaTiO}_2 - \text{Ni}_2\text{Nb}_2\text{O}_7$ . There are 2 figures

Card 1/2

Reversible characteristics of ...

S/181/62/004/005/028/055  
B108/B112

and 1 table. The most important English-language reference is: W. Merz.  
Phys. Rev., 91, 513, 1953.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk  
State University)

SUBMITTED: January 2, 1962

Card 2/2

STAFIYEVSKAYA, T.N.

Apollinarii Innokent'evich Kazantsev. Arkh.anat.gist.i embr. 38  
no.3:116-117 Mr '60. (MIRA 14:5)  
(KAZANTSEV, APOLLINARII INNOKENT'EVICH 1888-)

STAFIYEVSKIY, A.N.; BELOGLAZOV, N.K., kand.tekhn.nauk

Filter press tiles made of reinforced rubber. Khim.prom.  
no.6:463-464 Je '62. (MIRA 15:11)  
(Filters and filtration)

HUNGARY/Analytical Chemistry. Analysis of Inorganic Chemistry.

E

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81372.

Author : Gyenes I., Stafko B.

Inst :

Title : Investigation of Certain Intermediate Products Obtained in the Preparation of Diethylstilbendiol.

Orig Pub: Magyar kem. folyirat, 1958, 64, No 1, 16-17.

Abstract: With the aid of Kofler's micro-instrument the melting points were determined for n-oxypropyphenone (I), for a crystalline complex of pinacone derivative (3,4- dioxy - 3,4 di - n - oxyphenyl-n-hexane) with acetone (II) and of a pinacoline derivative (4,4-bis-n-oxyphenyl-3-hexane) (III). I was obtained by adding to a solution of 100 gr of technical pina-

Card : 1/2

36

*STAF*

226.1.1.

Státní úřad pro zeměměřictví a katastr, p. 22. (Zeměměřictví Praha, Vol. 4, no. 4, Mar. 1954)  
30: Mapa 20.11.100/1000000, <sup>East</sup> Evropská Komise (EKKL), IC, Vol. 4, No. 6,  
Praga 7, Č.S.S.R., 1954.

2747

RECORDED

Selected articles from the following periodicals: p. 70 (Zeměměřictví. Praha. Vol. 4, No. 5, May, 1954) / East European Geodesy (1954), 10, Vol. 1, No. 6, 1954.

STAFL, A.

Some problems of copyright in map works. p. 145.  
KARTOGRAFICKY PREHLED, Prague, Vol. 9, no. 4, Dec. 1955.

S: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6 June 1956,  
Uncl.

STAFL, A.

"Copyright for cartographic works."

p. 58 (Kartograficky Prehled) Vol. 10, no. 2, June 1956  
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,  
April 1958

STAFL, A.

Proper techniques for obtaining biopsy material in colposcopic examinations. Česk. gyn. 28 no.3:207-209 Ap '63.

1. Gyn.-por. klin. lek. fak. KU v Plzni, prednosta prof. dr.

Vl. Mikolas.

(COLPOSCOPY) (BIOPSY) (UTERINE NEOPLASMS)  
(NEOPLASM DIAGNOSIS)

DOHNAL, V.; STAFL, A.

Clinical significance of individual types of tissue in the field  
of examination. Cesk. gynek. 29 no.1:53-57 F'64

1. Gyn.-por. odd. MUNZ v Plzni (vedouci: MUDr. M. Sedlák) a Gyn.  
por. klin. lek. fak. KU v Plzni (prednosta: prof. dr. V. Mikulás).

STAFLOVA, J.; STAFL, A.

Morphological histochemical illustration of the vascular bed  
of the eye and its accessory organs. Cesk. oftal. 21 no.2:  
97-98 Mr. '65

1. Oční klinika (prednosta: prof. dr. R. Knobloch, DrSc.); gyn.-  
por. klinika (prednosta: prof. dr. V. Mikolas) lekárske fakulty  
Karlovej University v Plzni.

STAPL, A., (Plzen, Capkovo nam. 1); LINHARTOVA, A.: DOHNAL, V.

Cytoscopic picture of fielding and its pathogenesis. Cesk. gynek.  
44 no.3:209-210 Ap'65.

1. Gyn.-por. klinika (prednosta: prof. dr. V. Mikolas); Síkluv  
ustav patologické anatomie (prednosta: prof. dr. J. Vanek, DrSc.);  
lékarské fakulty Karlovy University v Plzni a gyn.-por. odd.  
Městského ústavu národního zdraví v Plzni (ředitel: MUDr.  
M. Sedlák).

STAFL, Adolf

Use of the azo coupling method for identification of phosphatase  
in the study of the capillary network of the cervix uteri. Cesk.  
morf. 10 no. 3: 336-338 '62.

1. Gyn. ... por. klinika LFKU v Pizni, prednosta Prof. MUDr. Vladimir  
Mikolas.

(CERVIX UTERI blood supply) (CAPILLARIES anat & histol)  
(AZO COMPOUNDS pharmacol)

STAFL, Adolf

Methods for the demonstration of the terminal vascular bed in the  
cervix uteri. Cesk. gynek. 27 no.3:217-219 Ap '62.

1. Gyn. por. klin. lek. fak. KU v Plzni, prednosta prof. MUDr. Vl.  
Mikolas.

(CERVIX UTERI blood supply)

I. SIANO

"The Neocene of the Slivenec platform. p. 46. CASOPIS, ODDIL PRIRODOVEDNY,  
Vol. 121, no. 1, 1952, Prague, Czechoslovakia)

SO: Monthly List of East European Accessions, L.S. Vol. 2 No. 7, July 1953, Uncl.

Stach, L.

Two generations of ice-formed pot holes near Stara Lysa.

p. 237 (Sbornik) Vol. 62, no. 3, 1957. Praha, Czechoslovakia.

SO: Monthly Index of East European Accessions (EEAI) LC, Vol 7, no. 1, Jan 1958

remains of weather-worn rocks from the Tertiary period along the lower part of the Uslava River.

p. 238 (Sbornik) Vol. 62, no. 3, 1957. Praha, Czechoslovakia.

30: Monthly Index of East European Accessions (EEAI) LC, Vol 7, no. 1, Jan 1958

1441. M.

Electrical Engineering Abstracts  
May 1954  
Reactors and Relays

2834. Additional losses in multi-layer reactors  
M. STAL. Elektrotech. Obzor, 42, No. 6, 303-17  
(1953) In Czech.

Equations for calculating the copper losses in multi-layer reactors are developed from Maxwell's equations. The differential equations for current density and for the radial and axial magnetic fields are solved using infinite progressions, and those referring to the current density are further simplified with the aid of Bessel functions and finally transformed into hyperbolic and goniometric functions. A practical example of the application of these equations is given.

S. A. L., N.; K. M., J.

Transient phenomena in switching asynchronous motors on and off. p. 165.  
(ELECTRTECHNICKY OBZOR, vol. 14, no. 4, Apr. 1955, Praha)

SG: Monthly List of East European Accession, (EEAL), LC, Vol. 4, No. 11,  
Nov. 1955, Incl.

Stafl, M.; Franzl, M.

"Additional losses in the screening plates of turbogenerators.

p. 69 (Prace, Vol. 6, 1956 (Published 1957) Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) IC, Vol. 7, No. 6, June 1958

STAEI, 11/1/68

PHASK I BOOK EXPLOITATION SOV/4408

## Československá akademie věd. Sekce technické

Prize given to the Institute for Electrical Engineering of the ČSAV (Czechoslovak Academy of Sciences) for 1957, Nr 8, Prague, 1958.  
116 p. 1,250 copies printed.

Scientific Ed.: Miloslav Rybář, Engineer, Doctor, Chief Ed.:  
Miroslav Hellr, Corresponding Member, Czechoslovak Academy of  
Sciences; Doctor, Engineer; State Prize winner; Ed. of this  
issue: Marie Horáková; Tech. Ed.: František Kondík.

**PURPOSE:** This collection of articles is intended for specialists  
in the field of high-voltage technique.

**CONTENTS:** The collection contains 9 original papers devoted to  
high-voltage technique and to special problems of heavy-current  
engineering. The papers deal with calculation of magnetic  
fields and short-circuit stresses, with the finding of turn  
short-circuits and thermal breakdowns and with effects of semi-  
conductor contacting on windings. The investigation of lightning  
arresters, the transfer of charges in electrostatic machines,  
and eddy-current losses in massive cylinders located in a magne-  
tostatic field are also treated. References accompany 5 of the  
papers. No personalities are mentioned.

VII. *Jeník, Váňa, and František Vlach. Investigation of  
Sparkover Character Characteristics with Special Con-  
sideration for Very High Voltages* 93

There are 10 references; 2 Czech, 4 English, and 4 German.

VIII. *Hanata, Vojtěch. Transfer of a Charge in Electrostatic  
Machines With a Dielectric Transmitter* 121

There are 3 references; 2 Czech and 1 French.

IX. *Štefan, Miroslav. Conducting Cylinder in a Magnetic Field* 137

There are 8 references; 3 Soviet, 4 English, and 1 German.

AVAILABLE: Library of Congress

JP/sem/er  
12-1-60

STAFI, N.

"The magnetic field of a conductor located in a cylindrical cavity of ferromagnetic material.

p. 1 (Elektrotechnicky Obzor. Vol. 47, no. 1, Jan. 1958.)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 6, June 1958

STAFL, Milos

Electrodynamic effects of alternating current placed at a distance from  
a conducting semispace. Acta techn Cz 5 no.2:124-142 '60. (EEAI 9:8)  
(Electric currents, Alternating)

9.2165

Z/042/62/000/010/002/004  
E140/E435

AUTHORS: Kubrycht, J., Štafl, M., Engineers, Candidates of Sciences  
TITLE: Experimental investigation of eddy current losses  
in conductors with rectangular cross-section  
PERIODICAL: Elektrotechnicky časopis, no.10, 1962, 594-606

TEXT: The authors consider that even in the two-dimensional approximation, previous derivations of eddy-current losses in conductors of rectangular cross-section have been based on oversimplified assumptions and nevertheless have yielded excessively complicated formulae. The purpose of the present study was the experimental determination of a simplified formula. The measurements were carried out in a homogeneous sinusoidally varying magnetic field. The distortion of the field due to the eddy currents was measured in order to assess whether this factor can be neglected. Losses were determined by a calorimetric method. Two formulae are obtained, one neglecting and the other respecting the field distortion. The former may be used with conductors whose width does not exceed approximately twice the skin depth. For arbitrary aspect ratios and angles with respect

Card 1/2

VB

Experimental investigation of ...

Z/042/62/000/010/002/004  
E140/E435

VB

to the field orientation the agreement between the measured results and those calculated by the present formulae is closer than 10%. There are 14 figures and 2 tables.

ASSOCIATION: Ustav pro elektrotechniku ČSAV, Praha  
(Institute for Electrical Engineering Czechoslovak AS,  
Prague)

SUBMITTED: July 15, 1962

Card 2/2

STAFLOVA, J.

Eye polytest, an instrument for mass examination of eye functions.  
Cesk. oftal. 21 no.5:422-424 S '65.

1. Ocní klinika lekarské fakulty Karlovy University v Plzni  
(prednosta prof. dr. R. Knobloch, DrSc.).

STAFLOVA, Jaroslava

Results of ophthalmological examination of school children. Cesk.  
ofth. 15 no.5:329-334 0 '59

1. Ocni oddeleni OUNX v Chebu, prednosta prof. MUDr. Jaroslav Kubik.  
(VISION TESTS in inf. & child)  
(STUDENTS)

Dr. J. Trochaská

Algoritmus akutní infekčních onemocnění. Česk. prof. Lékařstv. 1990-1991, N 1/61

1. infekční klinika fakultní nemocnice lekářské fakulty Univerzity v Praze (prednosta - prof. dr. J. Trochaská, MUDr).

STAFLOVA, J.; STAFL, A.

Morphological histochemical illustration of the vascular bed  
of the eye and its accessory organs. Cesk. oftal. 21 no.2:  
97-98 Mr '65

1. Oční klinika (prednostas prof. dr. R. Knobloch, DrSc.); gyn.-  
por. klinika (prednostas prof. dr. V. Mikolas) lekarske fakulty  
Karlov University v Plzni.

STAFFIN, S. P.

(The Five-Year Plan for electrification in the USSR) Moskva, Gos. tekhn. izd-vo, 1927. 31 p. map.

BURKOV, T.; MARINOVA, L.; BEZENSHEK, An.; STAFUNSKI, S.

Frequency of some stomatologic diseases among the population of the Pleven District depending on nutrition and social and living conditions. Izv Inst khranene BAN 3:227-234 '64.

STAGNARA, P.

Orthopedic therapy of essential scolioses in developmental stages.  
Possibilities and limitations. Acta chir. orthop. traum. cech. 29  
no.4:298-303 Ag '62.

1. Kliniki pro ortopedickou chirurgii v Lyonu, prednosta prof.  
Guilleminet.

(SCOLIOSIS)

STAHALIK, J.

~~STAHALIK, J.~~

GEOGRAPHY & GEOLOGY

Periodicals: GEOLOGICKE PRACE; ZPRAVY. No. 12, 1958

STAHALIK, J. Report on geologic mapping and investigation of the mercury deposits near Malachov and Tajov east of Buanska Bystrica. p. 59.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 5,  
May 1959, Unclass.

FILAJDIC, Mirko, dr. ing. (Zagreb); VILICIC, Davorka, ing. (Zagreb); STAHAN-  
Adamovic, Vlasta. (Zagreb)

Organoleptic evaluation of lipide foodstuffs. Kem ind 11 no.1:3-11 Ja '62.

1. Zavod za uoznavanje i analizu životnih namirnica Tehnološkog  
fakulteta Sveucilista u Zagrebu, Zagreb.
2. Član Redakcionog odbora, "Kemija u industriji" (for Filajdic).

STAHIK, J.

STAHIK, J. An arched bridge made of prefabricated reinforced-concrete parts. p. 123.

Vol. 1, no. 4 Apr. 1956  
NOVA TECHNIKA  
TECHNOLOGY  
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

K-12

HUNGARY/Optics - Photometry. Colorimetry

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 9598

Author : Stchl Endre

Inst :

Title : Modern Techniques of Reproduction. III. Instruments for  
Determination of Whiteness

Ori. Pub : Papiripar, 1958, 2, No 2, 129-132

Abstract : No abstract

Card : 1/1

STAHL, Endre

An invention in the printing industry. Musz elet 16 no.5:5,6 Mr '61.  
(EEAI 10:4)

(Hungary--Printing)

26.2.94  
9.6180

AUTHORS:

Morecki, A., Doctor, Docent, Stahl, J., Master of Engineering  
and Tomaszczyk, T. Master of Engineering

84455  
P/034/60/000/007/001/003  
A225/A026

TITLE:

Measurement of Linear and Angular Accelerations in Mechanical  
Works and Machines by Means of Tensiometric Acceleration  
Meters

PERIODICAL: Pomiary-Automatyka-Kontrola, 1960, No. 7, pp. 252-254

TEXT: The authors describe two gauges which measure the rate of acceleration in machines by means of a flexure-sensitive resistor mounted on a flexible-weight support. One of them serves for the measuring of linear accelerations (Fig. 1), the other for angular accelerations (Fig. 4). They are connected to Kelvin & Hughes graphic recorders. The linear acceleration gauge (Fig. 1) consists of a mounting made of duralumin (1), of a bakelite support (2) with flexure-sensitive resistors (3) cemented on, which holds a lead weight (4) on top. The entire device is protected by a plexiglass cylinder (5) screwed onto the mounting base and tightly closed by the cap (6). The inside of the cylinder may be filled with oil used as oscillation damper. The other gauge for the measuring of angular acce-

Card 1/3

X

84455  
P/034/60/000/007/001/003  
A225/A026

Measurement of Linear and Angular Accelerations in Mechanical Works and  
Machines by Means of Tensiometric Acceleration Meters

lerations is based on the same principle, but here two gauges like the ones described above are mounted on a revolving axle (Fig. 4, 2) which may be connected with the shaft of the measured motor. Electrical connections run through the mercury commutator (3). The measured accelerations may amount to 0.1 - 5 g. The ratio between the inherent oscillations of the instrument and the measuring oscillations should amount to 8:10 (without damping), 2:3 (with damping). The gauge's own oscillation may not be smaller than 150 cycles, the range of temperature: -20 to +30°C. The formula for the computation is:

$$C_{st} = 2 \varepsilon = 12 \frac{G \cdot L}{E \cdot b \cdot h_0^2} \quad (1)$$

The symbols represent:  $C_{st}$  - static sensitivity of the gauge in cm/cm at 1 g acceleration;  $\varepsilon$  - surface distortion at the support base at 1 g acceleration; G - weight of the lead ballast; L - distance from the weight center to the point of attachment in cm; E - modulus of elasticity of

UX

Card 2/3

STAHL, Jan, inz.

Reconstruction of city communications in Prague. Siln doprava  
13 no.2:2-4 F '65.

MORECKI, A., doc., dr., inz.; STAHL, J., mgr., inz.; TOMASZCZYK, T., mgr., inz.

Thermometric measurements of angular velocity. Fomiary 7 no.10:403-404  
0 '61.

(Physical measurements)

STAHL, K.

Tasks of Czechoslovak radio engineering in 1953. p. 1.

Vol. 11, no. 1, Jan 1953  
SLABOPRUDY OBZOR  
Praha, Czechoslovakia

So: Eastern European Accession Vol. 5 No. 4 April 1956

Stahl, P.

Top organization in the field of construction engineering. p. 342.  
INZENYRSKE STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 4,  
no. 15, Aug. 1954.

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

STAHL, Pavel, prof. inze.

Education of cadres in the building industry. Inz stavby 12  
no.1:1-4 Ja'64.

1. Slovenska vysoka skola technicka, Bratislava.

STAHL, W.

Additional information on investigation of fattening capacity. Tr. from the German.  
p. 365. (Koslemenyei, Budapest, Vol. 4, no. 3/4, 1954)

SO: Monthly list of East European Accessions (EEAL), LC Vol 4, no. 6, June 1955 Uncl

STAHLAVSKY, JAROSLAV, DR.

STAHLAVSKY, Jaroslav, Dr

200th anniversary of birth of Dr Jan Mayer, 6 February, 1754.  
Cas. lek. cesk. 93 no. 25:693-694 Je '54.  
(BIOGRAPHIES,  
\*Mayer, Jan)

Stahlik, J.

Simple method for calculation of reinforcement load with shearing force. p. 290. INZENYRSKE STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 4, no. 6, June 1956.

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

STAHHMANN, G.; Liebenow, W.

Schonhagen. p. 18.

(ARIPILE PATRIEI. Vol. 3, no. 7, July 1957, Bucuresti, Rumania)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 12, Dec. 1957.  
Uncl.

TOPIC	:	
CATALOGUE	:	Botanical and Plant. Ornamental.
ABS. JOUR.	:	RZhBiol., No. 3, 1959, No. 11178
AUTHOR	:	Stahn, B.
INST.	:	-
TITLE	:	Variety Trials of Beath (Erica gracilis).
ORIG. PUB.	:	Deutsch. Gartenbau, 1958, 5, No. 5, 121-125
ABSTRACT	:	In the area of Leipzig, there were conducted in 1956 and 1957, the comparative trials of 33 varieties of heath from 3 large floricultural concerns, these varieties having been developed from separate clones by means of breeding and vegetative reproduction. As the result, there were selected 14 best varieties recommended for further propagation. — G. J. Leouardit
CARD:	1/1	

BERITIC, T.; STAHULJAK, D.

Nickel. Lijeon. vjesn. 83 no.5:506-509 '61.  
(NICKEL toxicol)

STAHULJAK, D.; BERITIC, T.

Hygienic problems of swimming pools. Lijecn. vjesn. 83 no.8:  
812-814 '61.

(SWIMMING POOLS)

STAHULJAK, D.

"Determination of lead in flour and corn" by [Institut za medicinska istrazivanja, Zagreb] K. Volođer. Reviewed by D. Stahuljak. ~~\*~~ Bul sc Youg 7 no.1/2:50 F-Ap '62.

1. Rédacteur d'extraits, "Bulletin scientifique."

*\* other articles in this series also reviewed*

BERITIC, Tihomil, dr.; STAHULJAK, Dunja, dr.; SARIC, Marko, dr.

Electric current injuries. Lijecn. vjesn. 84 no.2:159-169 '62.

1. Iz Instituta za medicinska istrazivanja i medicinu rada i  
Skole narodnog zdravlja "A. Stampar" u Zagrebu.  
(ELECTRICITY)

JAKSIC, Z.; STAHULJAK, D.

General practice physicians in the world and in our country. Lijecn.  
vjesn. 84 no.4:368-371 '62.

(GENERAL PRACTICE)

**YUGOSLAVIA**

Dr Bunja STAHULJAK (Affiliation not given)

"The Seminar About Air Pollution."

Zagreb, Lijecnicki Vjesnik, Vol 84, No 8, Aug 1962; pp 819-870.

Abstract: Report on this five-day meeting held in June 1962 in Zenica under the combined sponsorship of the Federal Health Institute (Savezni zavod za zastitu zdravija) and the "Zenica" foundry works. Each day was devoted to a specific theme: General Problems of Air Pollution, Pathological Mechanism of Polluted Air on Human Organs, Symptoms of Disease due to Air Pollution, Methodology of Testing Effects of Air Pollution on Man, and Detection of Pollutants in the Air and Protection from Air Pollution. There were 70 registrants addressed by 14 specialists including Dr Wilkins of Great Britain and Dr Rjazanov of USSR. Next year's (1963) seminar in occupational medicine will be held in Split and devoted to the "Effect of the Working Environment on the Central and Peripheral Nervous System of the Worker."

1/1

45

THIS DIVE - BRAD STEPHEN, LAUREN

三

STAICU, C.

Dimensional analysis; stationary convection in free circulation. p. 317  
STUDII SI CERCETARI DE ENERGETICA. Bucuresti.  
Vol. 5, no. 3/4, July/Dec. 1955.

SOURCE: East European Accessions List, (EEAL), Library of Congress,  
Vol. 5, No. 11, November, 1956.

STAICU, C.

STAICU, C. Deduction of Flackett's equation through dimensional analysis, p. 85

Vol. 7, no. 2, Feb. 1955

GAZETA MATEMATICA SI FIZICA. SERIA A.

SCIENCE

BUCURESTI

So: MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, (EAL), IC, Vol. 4, no. 9,  
Sept. 1955, Uncl.

Category : AELMIN/General Problems - Method and Technique of Investigation.

Abstr Jour : Rof Zhur - Fizika, No 3, 1957, No 5588

Author : Stach, C.I.

Title : Determination of Physical Equations by the Use of Dimensionality.

Orig Pub : Metrol. ap., 1956, 3, No 4, 25-31

Abstract : No abstract

Card : 1/1

STANOV, G.

STANOV, G. Establishement of some relations in the theory of hydraulic machinery through dimensional analysis. p. 560 Yugoslavia's power resources and their utilization. p. 563

Vol. 1, no. 12, Dec. 1956  
HYDROTECHNIKA  
TECHNOLGY  
BULGARIA

See: East European Accession, Vol. 6, No. 5, May 1957

STAICU, C.

STAICU, C. Speed determination, through dimensional analysis, of a body falling into a viscous medium. p. 583. Vol. 8, no. 11, Nov. 1956.  
GAZETA MATEMATICA SI FIZICA. SERIA A. Bucuresti, Rumania.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

STAICU, C.

Dimensional analysis; the study of thermal radiation.

p. 380 (STUDII SI CERCETARI DE Eнергетика) (Bucuresti, Romania) Vol. 7, no. 3.  
1957

SO: Monthly Index of East European Accessions (MEAI) LC Vol. 7, no. 5. 1958

STAICU, C.

Determination of some physicochemical relations. p. 562.

STUDII SI CERCETARI DE FIZICA. (Academia Republicii Populare Romine.  
Institutul de Fizica.) Bucuresti, Rumania. Vol. 9, no. 4, 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 7, July, 1959.

Uncl.

STAICU, C. ; BELDIMAN, M.

Establishing the heating period limits. p. 109.

ENERGETICA. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din  
Romania si Ministerul Energiei Electrice si Industriei Electrotehnice)  
Bucuresti, Rumania, Vol. 7, no. 3, Mar. 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, no. 8, Aug. 1959.

Uncl.

Staiciu, C.I.

RUMANIA/Optics - Physical Optics

K-5

Abs Jour : Ref Zhur - Fizika, No 10, 1958, No 23831

Author : Staiciu C.I.

Inst : Not Given

Title : Dimensional Analysis. Investigation of Thermal Radiation.

Orig Pub : Studii si cercetari enorg. Acad. RFR, 1957, 7, No 3, 389-410

Abstract : Investigation was made of the thermal radiation by modern dimensional analysis, based on the solution of a system of diophantine equations. The results of the experimental measurements are given. The investigation leads to relations that express the maximum intensity of the spectrum and retain the proportionality with the fifth power of the absolute temperatures. Relations are derived for expressing the maximum spectral density and retaining the proportionality with the third power of the absolute temperatures. The relations satisfy the conditions of the Wien law. Two relations are obtained, expressing the spectral density and leading, through integrations, to the general density given by the

Card : 1/2

STAICU, C.

Formula for the wear of machine parts. p. 196.

METALURGIA SI CONSTRUCTIA DE MASINI. (Ministerul Industriei Metalurgice si Constructiilor de Masini si Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania) Bucuresti, Rumania; Vol. II, no. 3, Mar. 1959.

Sept.

Monthly List of East European Accessions (EEAI) LC Vol. 8, No. 9, 1959

Uncl.

STAICU, Constantin I.

Fundamental theorem of general dimensional analysis. Studii fiz  
tehn Iasi 13 no.2:159-172 '62.

L 36008-66 EWP(v), EWP(k), EWP(h), EWP(l)

ACC NR: AP6027337

SOURCE CODE: RU/0018/66/000/001/0042/0045

21  
B

AUTHOR: Croitoru, A.; Staicu, Florea

ORG: none

TITLE: Achievements in the modernization of machine tools at the Bucharest Pump Works

SOURCE: Constructia de masini, no. 1, 1966, 42-45

14

TOPIC TAGS: machine tool, quality control, industrial production

ABSTRACT: A survey of measures taken at the Bucharest Pump Work to modernize their machine tools in order to improve the quality and profitability of production. Several of the measures taken would also be useful in other types of enterprises to increase the productivity of the machines. [Based on authors' Eng. abst.]  
[JPRS: 36,559]

SUB CODE: 13, 14 / SUBM DATE: none

Card 1/1 *llb*

UDC: 621.9(09)

STAICU, G.I., ing.

Diameter of the discharge armature of water pipes. Ener-  
getica Rum. 11 no.12:628-630 D:63.

RUMANIA / Soil Science. Genesis and Geography of Soils.

J-1

Abs Jour : Ref Zhur - Biologiya, № 16, 1958, №. 72630

Author : Staicu, I.; Oprea, C. V.; Miresanu, P. L.

Inst : Rumanian Academy, Baza Timisoara

Title : New Contribution to the Knowledge of the Solonchaks of  
the Middle-Danube Lowland within the Rumanian People's  
Republic

Orig Dub : Studii si cercetari stiint. Acad. RPR. Baza Timisoara.  
Ser. stiinte agric., 1956, 3, № 3-4, 57-82

Abstract : An exemplary agricultural meliorative classification is  
cited of saline soils in the lowland, particularly in  
the Muresh-Aranka river basin. Acid, neutral and weakly  
alkaline and alkali soils are distinguished. Some  
physical-chemical properties of the soil are briefly  
examined, and methods of their melioration - liming, use  
of fertilizers, gypsum treatment. It is proposed to

Card 1/2

STAICU, I. ; BULGARIN, T.

Correction of the external conventional minimal temperature. p. 619.

REVISTA CONSTRUCTILOR SI A MATERIALELOR DE CONSTRUCTII. (Asociatia Stiintifica a Inginerilor si Technicienilor din Romania si Ministerul Constructilor si al Materialelor de Constructii) Bucuresti, Romania. Vol. 10, no. 12, Dec. 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 6, June 1959

Uncl.

NISTOR, T., dr.; STAIGU, I., dr.

Sanitary and veterinary control of animals slaughtered on  
conveyer belts in slaughterhouses. Ind alim anim 11 no.4:  
108-110 Ap'63.